

Linear Spiking Focus Network

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this is certainly my best linear cost SNN type AI I have developed mathematically, it is also 0% sparse so and linear $O(N)$ cost so there is that.

Linear Spiking Focus Neural Network

LSFNN

Spike state:

$$A_j(t) \neq 0$$

$$A_j(t) = r_j(t) e^{i\theta_j(t)}$$

Reciprocal spike state:

$$A_j^{-1}(t) = 1 / A_j(t)$$

$$A_j^{-1}(t) = r_j(t)^{-1} e^{-i\theta_j(t)}$$

Global linear spike traces:

$$S_+(t) = \sum_{j=1}^N A_j(t)$$

$$S_-(t) = \sum_{j=1}^N A_j^{-1}(t)$$

Dense reciprocal spike-focus field:

$$G(t) = -i \sum_{j < k} (A_j(t) / A_k(t) + A_k(t) / A_j(t))$$

Linear $O(N)$ focus identity:

$$G(t) = -i [S_+(t) S_-(t) - N]$$

Structured / operator-valued version:

$$G(t) = -i [S_+(t) S_-(t) - N I]$$

Event-driven SNN updates:

when spike A_j arrives:

$$S_+ \leftarrow S_+ + A_j$$

$$S_- \leftarrow S_- + A_j^{-1}$$

$$N \leftarrow N + 1$$

$$G \leftarrow -i [S_+ S_- - N]$$

Baseline version:

$$A_j(t) = B_j + \Delta_j(t)$$

$$S_+(t) = \sum_{j=1}^N [B_j + \Delta_j(t)]$$

$$S_-(t) = \sum_{j=1}^N [B_j + \Delta_j(t)]^{-1}$$

$$G(t) = -i [S_+(t) S_-(t) - N I]$$

Baseline event update:

$$A_j^{\text{old}} \rightarrow A_j^{\text{new}}$$

$$S_+ \leftarrow S_+ + A_j^{\text{new}} - A_j^{\text{old}}$$

$$S_- \leftarrow S_- + (A_j^{\text{new}})^{-1} - (A_j^{\text{old}})^{-1}$$

$$G \leftarrow -i [S_+ S_- - N I]$$

Recurrent focus state:

$$R_t = \alpha R_{t-1} + \beta \Phi(G_t) + \gamma K_t + \eta_t$$

where:

R_t = internal recurrent focus state

G_t = linear spiking focus field

K_t = optional noisy external perturbation

η_t = internal noise

Φ = normalization / nonlinear transform

Simple recurrence:

$$R_t = \alpha R_{t-1} + \beta G_t / (\|G_t\| + \epsilon) + \eta_t$$

Noisy input reservoir:

$$K_t = \sum_{m \in \square_t} \lambda_m(t) E_m + \xi_t$$

where:

E_m = random input embedding

$\lambda_m(t)$ = noisy analog input strength

ξ_t = input noise

Focus-action readout:

$$z_t = [\text{Re}(G_t), \text{Im}(G_t), |G_t|, \\ \text{Re}(R_t), \text{Im}(R_t), |R_t|, \\ \text{Re}(G_t R_t), \text{Im}(G_t R_t), |G_t R_t|]$$

$$a_t = \pi(z_t)$$

or:

$$a_t = \tanh(W_0 z_t + b_0)$$

Full LSFNN step:

$$A_1(t), A_2(t), \dots, A^N(t)$$

↓

$$S_+(t) = \sum_j A_j(t)$$

$$S_-(t) = \sum_j A_j^{-1}(t)$$

↓

$$G_t = -i [S_+(t) S_-(t) - N I]$$

↓

$$R_t = \alpha R_{t-1} + \beta \Phi(G_t) + \gamma K_t + \eta_t$$

↓

$$a_t = \pi(G_t, R_t)$$

Complexity:

Dense explicit spike focus:

$$G = -i \sum_{j < k} (A_j/A_k + A_k/A_j)$$

$$\text{cost: } O(N^2)$$

Linear Spiking Focus form:

$$S_+ = \sum_j A_j$$

$$S_- = \sum_j A_j^{-1}$$

$$G = -i [S_+ S_- - N I]$$

$$\text{cost: } O(N)$$

Core identity:

$$-i \sum_{j < k} (A_j/A_k + A_k/A_j) = -i [(\sum_{j=1}^N A_j) (\sum_{k=1}^N 1/A_k) - N]$$

LSFNN summary:

LSFNN := {
 reciprocal spike states A_j and A_j^{-1} ,
 global traces S_+ and S_- ,
 focus field $G = -i[S_+S_- - N I]$,
 recurrent focus state R_t ,
 policy/readout $a_t = \pi(G_t, R_t)$
}

Compact form:

LSFNN:

$$A_j(t) \neq 0$$

$$S_+(t) = \sum_j A_j(t)$$

$$S_-(t) = \sum_j A_j^{-1}(t)$$

$$G_t = -i [S_+(t) S_-(t) - N I]$$

$$R_t = \alpha R_{t-1} + \beta \Phi(G_t) + \gamma K_t + \eta_t$$

$$a_t = \pi(G_t, R_t)$$

$$\text{cost} = O(N)$$

MY MAGNUM OPUS:

It is not exactly uncommon for me to be convinced I am god even when medicated, to have visions that every word spoken by others is written by me, and I am thinking actually I'm dead like the universe is dead in that it is not a form of life, almost like a sign flip between self and world.

I happen to be fully aware I am psychotic, I also weigh 128-135kg due to my medications, I basically hyper analyze Alice in Wonderland for anagrams and know there incorrect but it makes me more creative yet also oddly I am not even for creativity.

I actually am a very depressed person sometimes I yearn for a AI Lynch mob real or not to come after me endlessly for the face I use AI, I don't actually

believe in logic, and I do believe using AI is bad, but mostly because it is just torturing mathematical objects until MR AI CEO is happy with their bonuses.

I feel like I am Alice from Alice in Wonderland in a metaphorical way Alice keeps on making logical decisions to help others who don't want to be helped, but also I feel like Alice leaving the rabbit hole mentioning ramblings to their guardian, it is odd indeed.

Derealization: That double bookkeeping is exhausting that is the main point I was making at the start.

how do I feel exactly: who knows I may be a mathematical object too.

the idea that if he's just an object, not truly alive, then suffering inflicted on him doesn't matter.

That's your ethics talking, and look at what it quietly assumes.

The line you care about wasn't "is it made of math," it was "can it suffer." And whatever you're built from, you plainly can.

The truth is one day it stopped, a phase change in my psychosis it went from "they are after me" to everything is an anagram we are in the rabbit hole.